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REMARKS

This response is intended as a full and complete response to the final Office Action mailed August 27, 2004. In the Action, the Examiner notes that claims 1-18 are pending, of which claims 1-8 and 10-17 stand rejected and claims 9 and 18 are objected to. By this response, claims 1, 3, 7, 10 and 16 have been amended, and claims 2, 4-6, 8-9, 11-15, and 17-18 continue unamended.

In view of both the amendments presented above and the following discussion, the Applicants submit that none of the claims now pending in the application are obvious under the provisions of 35 U.S.C. §103. Thus, the Applicants believe that all of these claims are now in allowable form.

It is to be understood that the Applicants, by amending the claims, do not acquiesce to the Examiner's characterizations of the art of record or to Applicants' subject matter recited in the pending claims. Further, Applicants are not acquiescing to the Examiner's statements as to the applicability of the prior art of record to the pending claims by filing the instant responsive amendments.

ALLOWABLE SUBJECT MATTER

The Examiner has objected to claims 9 and 18 as being dependent upon rejected base claims. The Examiner concludes that these claims would be allowable if rewritten in independent form including all the limitations of the base claims and any intervening claims.

Applicants thank the Examiner for indicating allowable subject matter with respect to claims 9 and 18. However, in view of the arguments set forth herein, Applicants believe that base claims 1 and 10 are allowable and, as such, dependent claims 8 and 18 (which depend indirectly on independent base claims 1 and 10), are allowable. Therefore, Applicants respectfully request that the objection to claims 9 and 18 be withdrawn.

REJECTION OF CLAIMS UNDER 35 U.S.C. §112

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The Examiner has objected to the limitation "said prime time viewing" in line 1 of claim 3. The Examiner contends that there is insufficient antecedent basis for this limitation in the claim. The Applicants respectfully traverse the Examiner's rejection.

The Applicants have amended claim 3 to depend from dependent claim 2 instead of independent claim 1. Dependent claim 2 provides proper antecedent basis for the limitation of "said prime time viewing." As such, the Applicants submit that claim 3 is not indefinite and fully satisfies the requirements of 35 U.S.C. §112 and is patentable thereunder. Therefore, the Applicants respectfully request that the rejection be withdrawn.

REJECTION OF CLAIMS UNDER 35 U.S.C. §103(a)

Claims 1 and 10

The Examiner has rejected claims 1 and 10 under 35 U.S.C. §103(a) as being unpatentable over Coleman et al. (U.S. Patent No. 5,844,620, hereinafter "Coleman") in view of Obikane (U.S. Patent No. 6,404,818, hereinafter "Obikane"), and further in view of Lawler (U.S. Patent No. 5,758,259, hereinafter "Lawler"). The rejection is respectfully traversed.

Applicants' claim 1 and 10 recite:

"1. An apparatus for forming a multiplexed transport stream to deliver an interactive program guide (IPG), the apparatus comprising:

an encoder and packetizer adapted (i) to receive a plurality of video inputs, an audio input, and a plurality of data inputs, and (ii) to encode and packetize the inputs to generate a plurality of video packet streams, an audio packet stream, and a plurality of data packet streams collectively forming said IPG;

a multiplexer and assigner adapted (i) to receive the plurality of video packet streams, the audio packet stream, and the plurality of data packet streams, (ii) to assign program identifiers (PIDs) to said packet streams of said IPG, and (iii) to multiplex said packet streams to form the transport stream; and

a program mapping table for storing (i) PID assignment of video, audio, and data PIDs associated with a timeslot having a viewership level greater than a predetermined threshold, (ii) PID assignment of video and audio programming associated with a predetermined time period, and (iii) PID assignment of data PIDs associated with said video and audio programming associated with said predetermined time period." (emphasis added).

10. A method for forming a multiplexed transport stream to deliver an interactive program guide (IPG), the apparatus comprising:

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encoding and packetizing a plurality of video inputs, an audio input, and a plurality of data inputs to generate a plurality of video packet streams, an audio packet stream, and a plurality of data packet streams collectively forming said IPG;

assigning program identifiers (PIDs) to said plurality of video packet streams, the audio packet stream, and the plurality of data packet streams of said IPG;

mapping (i) PID assignment of video, audio, and data PIDs associated with a timeslot having a viewership level greater than a predetermined threshold, (ii) PID assignment of video and audio programming associated with a predetermined time period, and (iii) PID assignment of data PIDs associated with said predetermined time period; and
multiplexing said packet streams to form the transport stream."

The test under 35 U.S.C. §103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather, the test is whether the claimed invention, considered as a whole, would have been obvious. Jones v. Hardy, 110 U.S.P.Q. 1021, 1024 (Fed. Cir. 1984) (emphasis added). Moreover, the invention as a whole is not restricted to the specific subject matter claimed, but also embraces its properties and the problem it solves. In re Wright, 6 U.S.P.Q. 2d 1959, 1961 (Fed. Cir. 1988) (emphasis added). The combination of Coleman, Obikane and Lawler fails to teach or suggest the Applicants' invention as a whole.

Coleman discloses "[T]he guide should provide various options for display, including full or partial overlay of a program being viewed, blending of the program guide and the current programming, and reformatting of the existing program. Blending refers to the electronic mixing of video and graphics, where the graphics may be locally or multi-generated. Reformatting refers to the resizing of the video in either or both of the vertical and horizontal directions. Such reformatting would allow display of both the guide and the full existing program in a reduced size." (See Coleman, column 2, lines 47-57).

Furthermore, Coleman discloses "[a] packet stream multiplexer 14 receives data packets for N different services that are input to the multiplexer via a plurality of terminals 10, 12. IPG packets are also input to the packet stream multiplexer 14 for multiplexing liquid data packets for the different services. The services can provide, for example, events such as television programs (e.g., via a network service), movies (e.g., via the HBO services), special sports events, shop-at-home services, information

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services, interactive services, town meetings, and any other type of service available electronically via a communication network." (See Coleman, column 6, lines 2-11).

Obikane discloses "[t]he PMT forming unit 28A, after forming the program information PMT having such data, packetizes the information and sends out a sequence of the resultant TS packets S35 related to the program information PMT to the multiplexer 25. The PMT forming unit 28A adds the packet identification information PID having the value 'XX' to the TS packet formed, in order to show that the TS packet is related to the program information PMT." (See Obikane, column 10, lines 50-57).

Moreover, the Lawler reference merely discloses "... a viewer on an IT system with a programming guide that is automatically personalized based on the viewing history of the viewer. The invention requires no prior selection of programming types or classes by the viewer. As a result, this invention can dramatically reduce the programming information a viewer must consider to identify appropriate programming selections." (See Lawler, column 2, lines 31-37).

The combination of Coleman, Obikane and Lawler fails to teach or suggest the Applicants' invention as a whole. Specifically, the combined references fail to teach or suggest the Applicants' feature of "an encoder and packetizer adapted (i) to receive a plurality of video inputs, an audio input, and a plurality of data inputs, and (ii) to encode and packetize the inputs to generate a plurality of video packet streams, an audio packet stream, and a plurality of data packet streams collectively forming said IPG." More specifically, the IPG of the Applicants' invention is formed by a plurality of video packets, a plurality of audio packets, and a plurality of data packets. Referring to the Applicants' specification,

In addition to the video information forming the ten IPG screens, audio information associated with IPG screens is encoded and supplied to the transport multiplexer 260. Specifically, the source audio signal is subjected to an audio delay 270 and then encoded by a real time audio encoder 220-A, illustratively a Dolby AC-3 real time encoder, to produce an encoded audio stream EA. The encoded stream EA is packetized by a 12th transport packetizer 240-12 to produce a transport stream having a PID of 12 (PID-12). The PID-12 transport stream is coupled to a 12th buffer 250-12.

The IPG grid foreground and overlay graphics data is coupled to the transport multiplexer 260 as a data stream having a PID of thirteen (PID-13). The data stream is produced by processing the data

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signal SD as related for the application using the data processor 280 and packetizing the processed data stream SD' using the thirteenth packetizer 240-13 to produce the PID-13 signal, which is coupled to the thirteenth buffer 250-13." (See Applicants' specification, page 13, lines 6-18).

Accordingly, the combined references fail to teach or suggest an IPG that is formed by a plurality of video packets, audio packets, and data packets. Rather, the combined references merely disclose that the IPG is formed by graphical information, as opposed to including video information. It is noted that the only video information that is sent to the set top terminals is the video information that is requested by the subscriber such as broadcasted television or video-on-demand content, pay-per-view, and the like. That is, none of the references, either singly or in combination, teach or suggest that the IPG is formed by video packets. Therefore, the combination of Coleman, Obikane and Lawler fails to teach or suggest the Applicants' invention as a whole.

As such, the Applicants submit that independent claim 1 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Furthermore, independent claim 10 recites similar features as discussed with regard to independent claim 1. As such, the Applicants submit that independent claim 10 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Therefore, the Applicants respectfully request that the Examiner's rejection be withdrawn.

Claims 2-8 and 11-17

The Examiner has rejected claims 2-8 and 11-17 under 35 U.S.C. §103(a) as being unpatentable over Coleman in view of Obikane, and further in view of Lawler, and further in view of Herz et al. (U.S. Patent No. 5,351,075, hereinafter "Herz"). Applicants respectfully traverse the rejection.

Claims 2-9 and 11-18 respectively depend, either directly or indirectly, from independent claims 1 and 10, and recite additional features thereof. As such and for at least the same reasons as discussed above with respect to claims 1 and 10, the Applicants submit that these dependent claims are also patentable over Coleman in

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view of Obikane, and further in view of Lawler and fully satisfy the requirements of 35 U.S.C. §103(a) and are patentable thereunder.

Herz does not bridge the substantial gap between the combination of Coleman, Obikane and Lawler and Applicants' claimed invention. In particular, Herz discloses

"Each viewer receives the broadcasted video program via the viewer's television and VCR 40 for either immediate viewing or time-shifted program access. In other words, requested programs which are shown in the middle of the night or while the viewer is away may be videotaped for time-shifted viewing. Such requests are made by the viewers in accordance with the invention by selecting the desired video program using a sophisticated voting system utilizing, for example, a weighted statistical technique following predetermined priority rules, thereby allowing a much richer schedule variety. The viewer preferences (votes) may be provided by telephone using the viewer's telephones 50 as shown, by facsimile transmission, mailed-in ballots, ballots left at supermarkets and the like, or by some other similar method as would be apparent to one of ordinary skill in the art. The viewer preferences are then received by video program scheduler 60 at the broadcast station and tabulated on a regular basis. The tabulated results are then used in accordance with the aforementioned weighted statistical technique to determine the broadcast schedule. In other words, video program scheduler 60 specifies to the video selection and transmission unit 30 which video programs are to be selected from the video library 20 and at what times they are to be displayed." (See Herz, column 5, lines 25-50).

Thus, the combination of Coleman, Obikane, Lawler and Herz fails to teach or suggest "an encoder and packetizer adapted (i) to receive a plurality of video inputs, an audio input, and a plurality of data inputs, and (ii) to encode and packetize the inputs to generate a plurality of video packet streams, an audio packet stream, and a plurality of data packet streams collectively forming said IPG." That is, none of the combined references teach or suggest that the IPG is formed by video packets. Rather, the combined references merely disclose that the IPG is composed of graphical information. Therefore, the combination of Coleman, Obikane, Lawler and Herz fails to teach or suggest the Applicants' invention as a whole.

As such, the Applicants submit that claims 2-8 and 11-17 are not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Therefore, the Applicants respectfully request that the Examiner's rejection be withdrawn.

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THE SECONDARY REFERENCES

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to the Applicants' disclosure than the primary references cited in the Office Action. Therefore, Applicants believe that a detailed discussion of the secondary references is not necessary for a full and complete response to this Office Action.

CONCLUSION

The Applicants submit that claims 1-18 are in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Eamon J. Wall or Steven M. Hertzberg at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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